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Fragment of an Analysis of a Case of Technical Writing

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Thad: Fragment of an Analysis of a Case of Technical Writing

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At the time of this study, I was primarily a compositionist becoming acclimated into the field of technical writing. I was used to teaching "universal" concepts of the writing process (pre-writing, drafting, editing, and proofreading) and historical concepts of rhetoric (writer, audience, purpose). Furthermore, I am a liberal, from the 70s no less. I emerged into my young adulthood believing that positive social change could be effected primarily by resistance to corporate culture, a culture I perceived as antithetical to individuality. In this study of one document produced by one writer in a large corporate organization, however, I noted a dynamic, as opposed to oppressive, interplay between the writer I observed and the culture in which he operated. I also came to appreciate that it is important for observers to be aware of and honest about their own biases when they enter into a research project. As a result of my study, I cautiously put forth two claims: 1) that traditional first-year writing pedagogies can provide lasting information beneficial to an employee's success and 2) that the direct study of writers in corporate structures can aid teachers of technical writing in the methods of writing instruction they choose to emphasize.

In his Prefatory Remarks to "Dora: Fragment of an Analysis of a Case of Hysteria," Sigmund Freud begs his reader's indulgence. "I cannot avoid making a few introductory remarks," he writes, "for the purpose partly of justifying from various points of view the step I am taking, and partly of diminishing the expectation to which it will give rise" (1). Indeed, he confesses that there was no "possibility of other specialists testing and checking" his results (1). He regrets the delicate situation wherein, as a scientist, he must reveal his subjects' "most secret and repressed wishes." "It is certain that the patients would never have spoken," he acknowledges, "if it had occurred

to them that their admissions might possibly be put to scientific uses" (2).

Following Freud's lead, I make a few introductory remarks myself. I must admit that the conclusions I draw in this paper and the results I observed cannot possibly be tested and checked, as I embarked on this study independently. That is, there were no colleagues to corroborate my observations, which were done privately and without corporate sanction or even awareness. Moreover, the engineer whose writing I observed is my first cousin. We grew up together. He trusts me. Surely he expected that I would be critical, versed in the art of literary criticism as I am. Surely he knew that, as an English professor, I would want to publish. Nonetheless, while certainly not revealing his "most secret and repressed wishes," he was open, candid, and quite forthcoming with me—his older cousin, I might add—about his writing processes, his company's practices, and his own personal reflections in ways that he surely would not have been with any other outside observer.

Whereas Freud is concerned with his subjects' trusting candor, Christine Barabas, in *Technical Writing in a Corporate Culture: A Study of the Nature of Information*, is concerned with the experimenter's "fetish of objectivity"—a fetish she believes is indulged in by "all researchers, regardless of their discipline" (121). Barabas cites David Dobrin's critique of his own 1985 study (with James Paradis and Richard Miller), "Writing at Exxon ITD: Notes on the Writing Environment of an R&D Organization." Dobrin reflects that his study

> was an attempt to provide disciplinary knowledge. It contained generalizations, tables, a certain veneer of jargon. It may have even proved useful to some people. But I'm afraid that it proved useful only for the reasons that certain mediocre fictions are useful. They present a story about the world which is more manageable and irresistible than fact. (qtd. In Barabas 121)

Barabas offers a further critique of traditional writing research methodologies, one excerpted from a 1973 article by psychologist Jerome Bruner. Bruner ponders the fact that

> it is economical to report the products of research and not the endless process that constitutes the research itself. But it is not enough in the deeper sense that we may be concealing some of the most fruitful sources of our ideas from one another. I have felt that the self-imposed fetish of objectivity has kept us from developing a needed genre of psychological writing—call it proto-psychological writing if you will—the preparatory intellectual and emotional labors on which our later, more formalized efforts are based. (qtd. in Barabas 122)

In the spirit of this "proto-psychological writing," I do not claim generalizations as a result of my study, nor do I construct detailed tables cataloguing my observations. This is not to say that I ignore more methodological studies. In fact, I draw on the work of Jack Selzer, who in "The Writing Process of an Engineer" tracks Kenneth E. Nelson's "writing as it proceeded through the documents comprising an entire engineering project" (179) as well as on the work of Stephen Doheny-Farina, who in "Writing in an Emerging Organization: An Ethnographic Study," compiles data from all participants in the creation of one document. My study, a sort of hybrid of both the above mentioned studies, focuses on one document and one writer over the course of forty days, thereby allowing me the luxury of exploring and revealing my own "intellectual and emotional labors" at the same time that I observe the work of my subject.

The Writer

The subject whose writing process I observed was Thad Allan, an engineer at OilCo Refinery in Small Town, US. Allan earned his B.S. from State University in Electrical Engineering. Two years later, he earned an M.S.E.E. (Master of Science in Electrical Engineering), also at State U. He was hired by OilCo that same year as an electrical and instrumentation engineer, and after working his way up the technical ladder was promoted

to I&E Projects Supervisor and later to Control Systems/ Analyzer Maintenance Section Supervisor in the Distillation and Specialties Department, both positions on the management ladder. In the latter position, Allan was responsible for all operations of the Central Operations Refinery Environment (CORE).

Allan eventually worked his way up to the position he occupied at the time of this study as an Engineering Associate in the Project Implementation Department in the Technical Division, a position back on the technical ladder. *Our Folks*, an OilCo in-house publication, announced Allan's promotion as follows: "Thad will be assigned administratively to the Electrical & Instrument Section of the Project Implementation Department... [and] will play a lead role in control systems strategy development and technology application."

With the time he spent at OilCo and the responsibilities he held there, Allan clearly cannot be represented as an emerging engineer whose writing processes had yet to be constructed by the social milieu in which they were occurring. Nor was the company he worked for an emerging one like Doheny-Farina's pseudonymous Microware, Inc., whose business ethos was constructed (in part) by the writing practices of its executives. Consequently, one aspect of the writing I observed can be described, as Barabas articulates, as a reflection of "how organizational culture influences writing" (94). In fact, in one of our interviews Allan remarked, "Nobody tells new employees what the rules are." He himself "learned these sensitivities by doing," and he learned them directly as a committed participant in the eminently established OilCo discourse community.

On the other hand, Allan's writing can be said to demonstrate as well "how writing influences organizational culture" (Barabas 101). Allan, his wife and their young daughters all lived in Small Town, and he stated that he certainly did not want to "pollute my own environment." Neither did he want the refinery to "blow up" while he was there. Consequently, he believed that he had a responsibility to his community as well as to his company. In fact, the nature of the writing I observed in this particular study did indeed wind up affecting OilCo's

organizational culture (as well as the larger community in which this culture is situated) with respect to safety as well as to profit.

The Writing Situation

My study followed the progress of one document from its inception as a written document to its anticipated approval by an upper-level management audience, specifically a Refinery Projects investment coordinator at OilCoUS Refinery Headquarters in Big Town. I focused on this one document as a social construction mediated primarily by Allan. Allan referred to this document as a Planning (or Design) Basis Memorandum (PBM). The idea for the document had been generated almost five years prior in response to an explosion that occurred at the Small Town OilCo refinery. This explosion was followed by a company exercise designed to determine the possibility of future "exposures," where these exposures were defined as events that had a low probability of happening but high consequences if they did. Allan's PBM was a direct result of that exercise.[1]

Allan described a PBM in general as a document in which one would "identify a problem, propose solutions, discuss alternatives, estimate costs, and make a recommendation." This particular PBM involved increasing the capacity of a 4-unit air-conditioning system in CORE. When the second 2 units were added as back-up to CORE's original 2 units, the cooling capacity of the 4-unit system was sufficient; in fact, with the addition of the 2 back-up units, it became redundant. The increase in the number of computers in CORE, however, increased the building's heat output and consequently eliminated the system's redundancy. When Allan's PBM was written, the system was operating at full capacity. That is, all 4 units were operating at full capacity all the time in order to cool the building sufficiently, thus negating the original intent for the 2 additional units to serve as back-ups.

According to Allan, 95% of the Small Town OilCo plant was computer controlled, and all of those computers were located in CORE. Since computers have to operate at fairly low temperatures, the failure of only one of the air-conditioning units could have shut down the whole refinery, resulting in a loss of profits or, worse, could theoretically have caused a potentially explosive malfunction, affecting the safety of both plant employees and the Small Town community at large. Allan considered the possibility of such a failure to be a low (but increasing) probability/high consequence event.

According to Allan, the purpose of this particular PBM was "to convince senior management in Big Town to spend $1½ million" on a "relatively small" project that he deemed important. He stated at the beginning of the study that he expected to spend about 20 hours over a calendar period of 3-4 weeks developing the PBM. He expected that the PBM would conform to the usual length of such documents: 4-5 single-spaced pages. The ultimate response he desired was, "Yes, we endorse the expenditure."

Primary and Secondary Audiences

Although Allan's name would be on the final version of the PBM, the document would consist of base data collected from other sources and would have been reviewed "somewhat," according to Allan, by technical reviewers, however, more extensively by political reviewers—specifically the section supervisor of the Facilities Development Division in the Business Development Department, a position on the management ladder. According to Allan, the function of these political reviewers is as follows: "They will look at the document to see how it fits in with the overall plan for the company, to see if it is consistent with what they've been telling Big Town, and to determine its priority in the larger scheme of things."

Allan described his primary audience, an investment coordinator at Refinery Headquarters in Big Town, as "very busy." "He will not spend a lot of time looking at this," Allan

recognized, "so it must make its point quickly." In particular, Allan defined this audience as "a high-level manager without technical background." According to Allan, this manager makes such decisions as, "We're willing to spend however much money on this project."

Allan indicated the possibility that before the PBM reached its primary audience it could cycle between himself and the Facilities Development Division more than once, depending on any problems that might be encountered. If problems were in fact encountered, Allan indicated that he and the Facilities Development Division section supervisor would derive a completed document together in the following manner: each would have a copy of the PBM; they would both sit in the section supervisor's office and discuss the document orally while Allan made notations in the margins.[2]

Allan stated that when he finally considered the PBM to be "complete," he would send it to the head of the Project Implementation Department at the Small Town site, a position situated on the management ladder (and Allan's boss). Allan anticipated that the department head would send the PBM back to him with questions (which Allan would perceive as problems) or with a stamp of approval. Allan disclosed that the only time he thought about the Project Implementation department head occurred in regard to particular sensitivities this reviewer may have had: "People are always trying to move ahead," he asserted. "Nobody wants to lay all his cards on the table; nobody wants to admit a mistake." An adjustment Allan might make in relation to such a concern might be, for example, that he would use the phrase "low supportability" instead of a more accusatory term like "low reliability."

Another concern Allan indicated he had about the Project Implementation department head was that he was not a Heating, Ventilation, and Air-Conditioning (HVAC) expert. If the department head were an HVAC expert, Allan felt he would not have to explain as much. Since the department head was not, Allan's explanations needed to be of a low-level technical nature. He stated that his focus would primarily be on reminding this reviewer "what the Central Operations Refinery

Environment is like" in order to illustrate to him the need to modify or replace the air-conditioning system.[3]

At the same time that he planned to send the PBM to his department head, Allan also intended to send a "courtesy copy" to the Electrical & Instrumentation Supervisor, his immediate supervisor on the technical ladder. Allan fully expected that this supervisor would understand the document. He believed, however, that as always, there existed the possibility that the supervisor might drop the document on his desk with a Post-It note attached near a particular section or statement that would say, for example, "What does this mean?" In this case, Allan would make the revisions necessary to clarify the section or statement.

Allan articulated a hierarchical difference between these last two secondary audiences that would be expressed in particular organizational behaviors. He felt that he could simply walk down the hall to the section supervisor's office at any time and comment on the document or ask questions in a conversational tone. If there were no extensive problems to be discussed, he likewise felt that he could take the elevator to the department head's office and ask the secretary as to whether or not he was available at the moment. If the problems the department head indicated were of a nature that would involve more extensive discussion, however, Allan felt that he would best schedule an appointment through the department head's secretary.

Allan stated that once all problems were resolved and the PBM was in its final form, his final step would be to write a cover letter describing the document, which the department head would then sign (as if he wrote it himself) and send to its primary Big Town senior management audience. Allan indicated that he would compose this letter from the model "standard transmittal form." He anticipated that it would begin, "Attached is a Planning Basis Memorandum which covers...."

Methodology

In "Writing in an Emerging Organization," Doheny-Farina catalogues his methods of data collection—field notes that consist of observational notes, theoretical notes, and methodological notes; tape recorded meetings; open-ended interviews; and discourse based interviews, modeled after an earlier study—as well as his strategy for data analysis (164). For his study, Selzer refers to "a long series of written questions that [he] had devised concerning the conduct and length of each [writing] session," to which he "asked Nelson to respond in detail...before and after he finished each writing session" (179).

In observing Allan's writing process, my intention was to conduct both telephone and personal interviews with Allan, interviews that would be both open ended and discourse based. My hope was that rather than slavishly following a pre-determined protocol, I would be able to develop questions that would arise organically from our interaction with his writing process in order to maintain a conversational flexibility as well as to develop a personal protocol for use in further studies. I also asked Allan to keep a written log indicating what he had written, noting in particular time spent and type of work done. I requested that he make these entries immediately after each writing session. My methodology here was deliberately opaque. I wanted to observe (in this process of observing a process) the spontaneous situations and complications I assumed would inevitably arise.

Not surprisingly, spontaneous situations and complications did in fact arise. During our first personal interview, for example, I realized that from the sparseness of information contained in Allan's (diligently collected and efficaciously organized) initial entries that I wanted him to add more information. I thus added to my protocol and asked that he add to this file 1) a brief description of what he had written and 2) thoughts he had about his audience while writing it. Again, during another interview, I further expanded the protocol by asking Allan to consider the following questions as well: 1) when you stop, why do you stop? 2) what do you do when you stop? and 3) when you delete, what do you delete and why?

The personal interviews I conducted with Allan took place in his office on the third floor of OilCo's Refinery Main Office

Building.[4] I recorded both our telephone and personal interviews in hand-written notes, occasionally asking Allan to pause so that I could keep up with the conversation and maintain reliable records at the same time. Subsequent to the interviews, I converted these hand-written records into computer files, in which I could elaborate on my informal shorthand. This process occurred moments after the telephone interviews; hours after the personal ones: "emotions recollected in tranquility" one could say. Occasionally, I would find that I was not able to recollect a particular written train of thought, or I would encounter a reference or term about which I was confused. In such cases, I inserted a parenthetical "check with Thad" comment and indeed would check with Thad at the beginning of our next encounter or in an informal telephone conversation.

The Writing Process

On Day 9 of our study, Allan gave me three print-outs:

1. Steps in Developing a Planning Basis Memorandum (PBM) (the file I requested he keep for me)

2. SMALL TOWN REFINERY BACK UP AIR CONDITIONING SYSTEM FOR THE CENTRAL OPERATIONS REFINERY ENVIRONMENT (CORE) (his outline, approximately half a page, single spaced, consisting of 5 headings, each with 1-4 subheadings)

3. SMALL TOWN REFINERY BACK UP AIR CONDITIONING SYSTEM FOR THE CENTRAL OPERATIONS REFINERY ENVIRONMENT (the beginning of his first draft, half a page, single spaced)

In response to my questions, Allan stated that he initiated the draft for his PBM on a blank screen on his computer. First, he created what he referred to as a "place holder" for the Problem

Statement. Then he began with BACKGROUND. In BACKGROUND, he stated that he "thought as he wrote." He stated that when he completed BACKGROUND, he intended to return to the Problem Statement, as his thoughts would be clearer then. His articulated concerns were that the document "flow properly" and that the problem statement be "concise."

During the composing of this portion of the draft, Allan reported that he was constantly interrupted by phone calls. He could only write about "3 words a minute" because of these interruptions and finally just "gave up." He clarified that he had spent 10-15 minutes of Day 1 writing an outline. He stated that he had had the format for this particular type of document in his head.

On Day 19, Allan produced two sets of new printouts:

1) Steps in Developing a Planning Basis Memorandum, with additional entries for Day 9 and Day 13 and the corresponding SMALL TOWN REFINERY BACK UP AIR CONDITIONING SYSTEM FOR THE CORE (a full page and part of a second page long)

2 Steps in Developing a Planning Basis Memorandum, with added entries for Day 15 and Day 18 and the corresponding SMALL TOWN REFINERY BACK UP AIR CONDITIONING SYSTEM FOR THE CORE (now a full 2 pages long).

Allan's Day 13 entry in Steps in Developing a Planning Basis Memorandum was quite detailed and reflected in particular my request that he add thoughts he had about audience. It read in part,

> Calculation was done just to verify in my own mind that I had a technical position which I could defend to non-A/C-experts in a simple way. (Why the moon doesn't fall down from the sky may be simple for a physicist to understand, but try explaining it to your mother.) Next, I had a concern that even the low level of technical detail I was putting in the document would be too much. The

> idea here is to point out a problem, verify the problem is real, propose a solution, verify that the proposed solution is the "best" solution (and "best" can be defined in different ways), and then recommend the expenditure required to implement the proposed solution. If I make it too long, it won't get read. If I make it too short, I may not have fully justified my position.

Because he had not noted it, I had to clarify that Allan worked about 1 ½ hours on the PBM on Day 15, during which time he "walked around and pulled old files" (mechanical catalogs) to see if the catalog agreed with data from the nameplate on one of the air-conditioners, data which in fact had "surprised" him and which he had to investigate before he could proceed. I also had to clarify that he spent about 2 hours on the PBM on Day 18, during which time he worked in his office over the weekend. "Obviously it's much easier to write when no one is stopping by your office, calling you on the phone, or expecting you in meetings," Allan professed in this entry.

In response to my questions, Allan stated that he had not read what he had written yet "to see if it flows." He knew the beginning had been written in "bits and pieces because of interruptions." "This is standard," he stated. However, he thought the second part flowed. Allan declared that he does not use a "formal process," which he defined as "having a theme, writing an outline, fleshing it out, going through multiple steps." He said he was "never comfortable with that." He said he "works in his head, on the fly," and "lets the document flow out." Then he will "patch the document." Often he writes two sentences and then stops to look something up. He described this process as "jerky writing." Allan reasserted that he does not do "formal things" in his writing. When I asked what he did with his outline while he wrote, he stated that he placed it to the left of his computer. I asked if he ever referred to it, and he replied that he "looked at it from time to time."

Allan stated that when he was ready to read the entire PBM, he would "edit it for flow, hopefully not for content." In general, he stated that he deletes at most 3 or 4 words when he edits (or writes). One reason he would delete might be that "the tense

doesn't make sense, doesn't read quite right." He gave the following example of a sentence written in a problematic tense: "If we were doing this today it would be different than twenty years ago" and explained that "it is important in writing these documents not to point the finger, but rather to show how things have changed so that it doesn't look like something should have been done but wasn't." Consequently, complicated tense problems often come up.

In his Day 27 entry, Allan corrected an earlier observation about his writing process. "I found that I do frequently re-read one or two sentences back," he acknowledged, "and make minor editorial changes." He continued,

> That is, I might write a short paragraph and then read it to see if I like the way it sounds....I also found that when I do go back and read, it's always within the current paragraph. So it seems that when I write, I have a concept in mind and let it flow to the page, focusing on the single paragraph that I'm writing. Once I have it like I think I want it, I move to the next paragraph and generally don't go back and read earlier paragraphs.

At 9:45 a.m. on Day 29 Allan decided, "I must be finished." At this time he printed the document, read it, and marked revisions with a red pen. He spent 35 minutes making these revisions, which included 9 additions for clarity. For example, he amended a sentence discussing "the equipment in the control rooms" to refer more specifically to "the *new* equipment in the control rooms." Likewise, he clarified a statement that "the required air conditioning capacity is 136 tons" so that it read more specifically "the required air conditioning capacity *for the current load in CORE* is 136 tons." Some of Allan's revisions involved the addition of complete sentences. For example, after providing the "combined nameplate rating" of the "four air handlers," Allan inserted two sentences to indicate further the ratings of the individual units: "*The two Specialties air handlers are each 26 ton units. The Fuels units are 48 tons and 35 tons.*" He also corrected 3 typos and 1 subject-verb agreement error.

Allan then "put the pen corrections in the document" and "made one 'improvement' in the third paragraph of BACKGROUND." "Next," he wrote in his Day 33 entry, "I added the first paragraph to the section which I had previously called the Problem Statement," a process which took only about 5 minutes. "Hopefully, Allan added, "the 'Big Town reader' will get interested enough based on this paragraph to read the rest of the paper." On Day 30, Allan moved one paragraph that he felt was "improperly placed." As he had expected, the document consisted of 5 single-spaced pages. In this form the document proceeded to its political reviewer.[5]

Conclusions

Clearly Allan's writing can be described as a socially constructed process in which a writer within an organizational culture creates meaning that influences as well as is influenced by that culture. Even though Allan composed this Planning Basis Memorandum as an individual writer, audiences and contexts constructed within the OilCo discourse community already existed as part of his writing consciousness. He was aware of the format of the document he intended to write before he began it. He was also aware of the various audiences through whom the document would proceed and composed with their diverse preoccupations specifically in mind. At the same time, Allan was able to construct the meaning he intended to construct, a meaning he hoped was synchronous with the values of the corporation in which he was performing.

With respect to the progression of Allan's writing itself, I found it curious that although he claimed to use nothing "formal," his process—in this writing project at least—was not at all unlike those formally taught in first-year writing classrooms. He started with a theme, albeit a specific, utilitarian one. He then constructed an outline, one based on a familiar genre or mode. Though he claimed only to refer to that outline from time to time, the finished document—in

process as well as in product—followed the course of the outline fairly specifically.

When necessary, Allan conducted appropriate research activities. In spite of the fact that he was not initially aware of it, his writing was in fact recursive from paragraph to paragraph. He engaged in peer review and composed with a specific (though highly complex) audience in mind. Though he did not, for example, freewrite on the completed draft's more salient points and begin anew—a technique an academic might advise in the course of a more exploratory project—he nonetheless engaged in moderately substantial revision.

These observations about the formal nature of Allan's writing process led me to my final analysis of this particular case of technical writing, an analysis I enacted on myself. When I initiated this study, I truly believed that I had no particular agenda to prove or disprove, that I could observe from as neutral a position as possible the writing process of this one engineer. If I had any bias at all, as a long-time liberal, I presumed it would be against the vast, technological, corporate structure of OilCo. However, I imagined that this bias would be counteracted by the personal relationship I have with Allan. I discovered, however, the OilCo corporate structure itself to be considerably seductive, particularly with respect to what Barabas would refer to as its "symbolic patterns of discourse" (75). I could not help but notice the United Way bulletin board in the lobby; the well-dressed, well-spoken African-American female receptionist; the prominently located, high-quality handicap access ramp. More pertinently, I was impressed by the abundance of safety features predominant throughout the refinery. Could it be that my liberal bias against corporate culture as perceived from outside that culture is...naive?

A more relevant bias I discovered is that I want to see my first-year writing instruction as useful, relevant to subsequent courses in technical writing, and not just a moot training ground on which aspiring graduates must prove themselves. It is not improbable that this bias could have affected my study. I can cite one obvious example. When I asked Allan on Day 19 of our study where he placed his outline and whether or not he referred to it while he was writing, I wanted to discover whether

the pedagogical directive to pre-write applied in his nonacademic environment. When Allan responded that yes, he "looked at it from time to time," I unthinkingly replied, "Good!" Allan then looked at me with an expression I could describe as being relieved he had given the right answer.

Of course, I immediately retracted my ethnographically inappropriate evaluation of Allan's response in order not to influence my data (any more than I already had) and openly discussed with Allan the bias I thought I might be bringing into our study. In a conversation one could characterize as "meta-ethnographic," we discussed the Heisenberg Uncertainty Principle (the axiom that nothing can be observed without itself being affected by that observation) and its inevitable influence on any project.

Just before we concluded our Day 40 personal interview, Allan asked if I would "read his finished document as an English paper" after I concluded my study. "Nobody grades my papers," he protested. "Engineers are notoriously bad writers," he professed, even though he felt that he himself was "better than the average OilCo writer." Nonetheless, he said, he "gets no feedback from people who know how to write." In light of the Heisenberg Uncertainty Principle, I wonder if perhaps Allan wrote to please me as well as his supervisors, if I as his cousin, the English teacher, somehow infiltrated his discourse community. Conversely, I wonder if "what was being observed" inevitably affected "who did the observing" just as "what was being observed" was being affected itself. Did my love for my cousin influence my positive perception of the writing he was doing and the culture in which he was doing it?

In closing, I again invoke Freud. "It is obvious," he warns those who might overreact to his analysis of Dora,

> that a single case history, even if it were complete and open to no doubt, cannot provide an answer to all the questions arising out of the problem of hysteria. It cannot give an insight into all the types of this disorder, into all the forms of internal structure of the neurosis, into all the possible kinds of relations between the mental and the somatic which are to be found in

> hysteria. It is not fair to expect from a single case more that it can offer. (7-8)

Indeed, it is not fair to expect one case of technical writing to reveal all the relations between writer and culture, between observer and observed in this strange interplay that encompasses the performance of writing. What this case has offered to me, however, is a few insights about research and a few ideas about teaching.

As a researcher, I admit that I reached a conclusion I wanted to reach: that individual writers in corporate structures do internalize and use writing instruction they have had in college, particularly in their first-year writing classes, whether they are conscious of that fact or not. Moreover, I observed an individual writer not as being dominated by organizational culture but rather as interacting dynamically with that culture to effect change—again, a conclusion I was happy to draw. Do these serendipitous results invalidate my research? Well, yes and no. For my next project, I believe I can be a bit more disinterested, and as a result of this study, I have been able to add more specific instructions to my informal protocol style wherein questions arise organically from discussion.

More importantly, this research has invigorated my teaching of technical writing. I feel confident that technical writing instruction is not separate from, indeed depends on, such first-year writing practices as prewriting, drafting, editing and proofreading. However, in my technical writing instruction, I see that it is important to focus less on prewriting practices such as brainstorming and freewriting and more on research, outlining, and working from models. I see that audience analysis in technical writing must be extensive and comprehensive and that an analysis of how writers define and position themselves within a hierarchal structure is critical. Moreover, basic concepts of word choice and verb tense are crucially linked to the success of conveying an intended message. And finally, it is my hope that these insights and observations may contribute one more fragment in the growing body of ethnography that continues to provide insight on the ways that words come to mean.

Notes

[1] During one interview, Allan revealed why it took almost five years for this project to be proposed. The original project that resulted in response to the post-explosion exercise coupled the repair/replacement of these air-conditioning systems with a proposal to add on to the CORE. This construction project proved to be problematic. The probability that the air-conditioning system would fail, however, had continued to increase. Consequently, Allan said that he decided to treat the air-conditioning problem as a separate issue. I asked him if he planned to address this history of the problem in his PBM, and he emphatically said no. He stated that he "doesn't want Big Town to think about anything other than the improvement of the air-conditioning system." He did not want them to respond by saying, "Let's do a study on improving the a/c system and adding on to the building at the same time." "These studies have already been done," Allan asserted.

[2] Allan described these political reviewers as "word engineers." Despite his clear articulation of what it is these reviewers actually do, he nonetheless remarked rather disparagingly, "They think they're adding value, not just changing words."

[3] Allan compared this low-level technical explaining to a device in science fiction writing (which he reads avidly) where a character will ask another character a technical question in order to provide the author with an opportunity to explain a scientific concept to a non-technical reader.

[4] One of our interviews spilled over into the refinery itself. On Day 9 of the study, Allan escorted me on an extensive tour of the OilCo plant, specifically so he could take me through CORE and show me the 4-unit air-conditioning system he was proposing to modify or replace. During this tour, Allan's pride in the refinery and his position in it were immediately apparent: "You are looking at one of the largest refineries in the United States," he remarked. In CORE itself, the department he once supervised, I perceived his facial expressions to indicate not only pride, but a great joy at having been so integrally involved in such a sizable and complex operation.

[5] Approximately two months after Allan's PBM was issued to Big Town, funding was approved. Engineering design and construction took approximately ten months, after which time the Backup Air Conditioning System for the CORE was functional and complete.

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